Pan Cytokeratin Plus [AE1/AE3+8/18]

Prediluted Mouse Monoclonal Cocktail Antibody

Control Number: 901-162IP-051711

Catalog Number: IP 162 G10

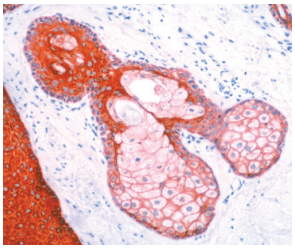
Description: 10 ml, predilute

Intended Use:

For In Vitro Diagnostic Use

Summary and Explanation:

AE1/AE3 recognizes acidic and basic subfamilies of cytokeratins. The cocktail of these two antibodies can be used to detect most human epithelia. The acidic cytokeratins have molecular weights of 56.5, 55, 51, 50, 50, 48 46, 45, and 40 kDa. The basic cytokeratins have molecular weights of 65-67, 64, 59, 58, 56 and 52 kDa. Clone 5D3 recognizes cytokeratin (CK) 8 and 18 intermediate filament proteins. These are 52.5 kDa and 45 kDa respectively. In normal tissues, 5D3 recognizes all simple and glandular epithelium. In the past, AE1/AE3 has had problems marking certain tissues types and adenocarcinomas. The addition of CK 8/18 remedies some of these problems. For example a study of twenty-eight lipid cell (steroid cell) tumors of the ovary were studied by immunohistochemistry; 46% were positive for Cytokeratin 8/18 antibody, 37% were positive with the Cytokeratin cocktail AE1/AE3.



Skin stained with Pan Cytokeratin Plus antibody cocktail.

Principle of Procedure:

Antigen detection in tissues and cells is a multi-step immunohistochemical process. The initial step binds the primary antibody to its specific epitope. After labeling the antigen with a primary antibody, a secondary antibody is added to bind to the primary antibody. An enzyme label is then added to bind to the secondary antibody; this detection of the bound antibody is evidenced by a colorimetric reaction.

Source: Mouse monoclonal

Species Reactivity: Human, mouse and rat

Clone: AE1/AE3 + 5D3

Isotype: IgG_1

Antibody Category: Carcinoma

Epitope/Antigen: AE1/AE3 + CK8/18

Total Protein Concentration: ~10 mg/ml. Call for lot specific Ig concentration.

Cellular Localization: Cytoplasmic

Positive Control: Skin or adenocarcinoma

Normal Tissue: Skin, breast or colon

Abnormal Tissue: Breast, colon and prostate carcinomas, lung adenocarcinoma

Known Applications:

Immunohistochemistry (formalin-fixed paraffin-embedded tissues)

Supplied As: Buffer with protein carrier and preservative.

Storage and Stability:

Store at 2ºC to 8ºC. Do not use after expiration date printed on vial. If reagents are stored under conditions other than those specified in the package insert, they must be verified by the user.

Protocol Recommendations:

Pretreatment Solution (recommended): Reveal

Pretreatment Protocol:

Heat Retrieval Method:

Retrieve sections under pressure using Biocare's Decloaking Chamber, followed by a wash in distilled water. Alternatively, steam tissue sections for 45-60 minutes. Allow solution to cool for 10 minutes then wash in distilled water.

Peroxide Block: Block for 5 minutes at RT.

Protein Block:

Optional: Incubate for 5-10 minutes at RT.

Primary Antibody: Incubate for 30 minutes at RT.

Secondary: Incubate for 10 minutes at RT.

Tertiary: Incubate for 10 minutes at RT.

Chromogen: Incubate for 5 minutes with DAB at RT.

Counterstain:

1. Rinse with deionized water.
2. Incubate for 5 minutes with automated Hematoxylin.
3. Rinse with TBS Buffer for 1 minute followed by a rinse with deionized water.

Quality Statement:

Biocare protocols have been standardized using in-house antibodies, detection and accessory reagents for use on the intelliPATH FLX automated stainer. Recommended staining protocols are specified in the datasheet of the antibody of interest. Pre-optimized intelliPATH FLX protocols with preset parameters can be displayed, printed and edited according to the procedure in the operator's manual. Refer to the operator's manual for additional instruction to navigate intelliPATH FLX software and stainer. Use TBS for washing steps unless otherwise specified.

Performance Characteristics:

The optimum antibody dilution and protocols for a specific application can vary. These include, but are not limited to: fixation, heat-retrieval method, incubation times, tissue section thickness and detection kit used. Due to the superior sensitivity of these unique reagents, the recommended incubation times and titers listed are not applicable to other detection systems, as results may vary. The data sheet recommendations and protocols are based on exclusive use of Biocare products. Ultimately, it is the responsibility of the investigator to determine optimal conditions. These products are tools that can be used for interpretation of morphological findings in conjunction with other diagnostic tests and pertinent clinical data by a qualified pathologist.

Quality Control:

Refer to NCCLS Quality Assurance for Immunocytochemistry approved guidelines, December 1999 MM4-A Vol.19 No.26 for more information about tissue controls.

Precautions:

This antibody contains less than 0.1% sodium azide. Concentrations less than 0.1% are not reportable hazardous materials according to U.S. 29 CFR 1910.1200, OSHA Hazard communication and EC Directive 91/155/EC.

Sodium azide (NaN3) used as a preservative is toxic if ingested. Sodium azide may react with lead and copper plumbing to form highly explosive metal azides. Upon disposal, flush with large volumes of water to prevent azide build-up in plumbing. (Center for Disease Control, 1976, National Institute of Occupational Safety and Health, 1976)

Specimens, before and after fixation, and all materials exposed to them should be handled as if capable of transmitting infection and disposed of with proper precautions. Never pipette reagents by mouth and avoid contacting the skin and mucous membranes with reagents and specimens. If reagents or specimens come in contact with sensitive areas, wash with copious amounts of water.

Microbial contamination of reagents may result in an increase in nonspecific staining. Incubation times or temperatures other than those specified may give erroneous results. The user must validate any such change. The MSDS is available upon request.

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IVD

CE

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Troubleshooting:

Follow the antibody specific protocol recommendations according to data sheet provided. If atypical results occur, contact Biocare's Technical Support at 1-800-542-2002.

Limitations and Warranty:

There are no warranties, expressed or implied, which extend beyond this description. Biocare is not liable for property damage, personal injury, or economic loss caused by this product.

References:

1. Seidman JD, Abbondanzo SL, Bratthauer GL. Lipid cell (steroid cell) tumor of the ovary: immunophenotype with analysis of potential pitfall due to endogenous biotin-like activity. Int J Gynecol Pathol. 1995 Oct; 14(4):331-8.

2. Bunton TE. The immunocytochemistry of cytokeratin in fish tissues. Vet Pathol. 1993 Sep; 30(5):418-425.

3. Sorensen SC, Asch BB, Connolly JL, Burstein NA, Asch HL. Structural distinctions among human breast epithelial cells revealed by the monoclonal antikeratin antibodies AEI and AE3. J Pathol. 1987 Oct; 153(2):151-162.

4. Pinkus GS, Etheridge CL, O'Connor EM. Are keratin proteins a better tumor marker than epithelial membrane antigen? A comparative immunohistochemical study of various paraffin-embedded neoplasms using monoclonal and polyclonal antibodies. Am J Clin Pathol. 1986 Mar; 85(3):269-277.

5. Pinkus GS, O'Connor EM, Etheridge CL, Corson JM. Optimal immunoreactivity of keratin proteins in formalin-fixed, paraffin-embedded tissue requires preliminary trypsinization. An immunoperoxidase study of various tumours using polyclonal and monoclonal antibodies. J Histochem Cytochem. 1985 May; 33(5):465-473.

6. Center for Disease Control Manual. Guide: Safety Management, NO. CDC-22, Atlanta, GA. April 30, 1976 "Decontamination of Laboratory Sink Drains to Remove Azide Salts."

7. National Committee for Clinical Laboratory Standards (NCCLS). Protection of laboratory workers from infectious diseases transmitted by blood and tissue; proposed guideline. Villanova, PA 1991; 7(9). Order code M29-P.